



**SPEECH COORDINATOR  
A PATENT APPLICATION  
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**BACKGROUND OF THE INVENTION**

Parkinson's Disease has been around many years. Most mysterious is the cause, which is unknown. Once a person gets Parkinson's disease, there is no cure; you must learn to live with it.

Parkinson's Disease has been referred to as an ailment of old age. But recent studies indicate that the incidence of new cases reaches a peak at about age 55. About half the victims are affected during this time frame, and about ten percent of cases appear before age 40. It strikes both men and women with a slightly higher percentage of men than women.

Symptoms include tremors, rigidity, and slowness of movement. Other major symptoms that develop over a period of time include stooped posture, a soft and indistinct voice, a slurred and mumbled speech, and balance problems, known as postural instability. Parkinson's Disease is a slowly progressive neurological condition that affects the coordination of muscles used for speech and voice. It is estimated that 75% of individuals with Parkinson's disease experience changes in voice and speech production at some point through the course of the disease. 4% of individuals report changes in speech and voice as the first Parkinson's disease symptoms noticed.

With the recent advances in anti-Parkinson medication many individuals are moving and functioning better than ever before. While medications are the primary tool for management of Parkinson's disease, the effect of those agents on speech and voice deficits are harder to measure. Even anecdotal accounts from persons with Parkinson's disease are inconsistent. A majority of individuals with Parkinson's disease states that they notice little change, either positive or negative, in speech and voice ability related to changes in medication regime.

A relatively new augmentative communication system, that amplifies the voice and improves speech clarity through a filtering system, can be beneficial for individuals with poor speech intelligibility due to severe dysarthria (muscle control). A significant drawback of this device is that it is cost-prohibitive for most people. Other augmentative communication devices are available. These range from hand-made communication books or tablets to sophisticated computerized equipment. Various comments are that these are very costly, ranging from several hundred dollars to five thousand dollars. The devices described above, as well as numerous other devices designed to accomplish the same or similar purposes, have not proven to be completely satisfactory.

### **BRIEF DESCRIPTION OF THE INVENTION**

The speech coordinator is a lightweight elongated flat material tool that works to improve the speech of individuals with Parkinson's Disease. The tool is approximately 5 inches in length, approximately 1 1/4 inches in width with one opening approximately 1/2 inch in diameter located at one end. The window opening is designed for an individual to view through the window opening different colored dots or symbols that are approximately 1/2 inch in diameter. A 1/2 inch

extra thickness is attached to the elongated body at the opposite end of the window opening serves as a handle to control and direct the tool. The function of the tool opening works in conjunction with the companion card chart. This companion card chart can be constructed of paper, plastic or any material, which has a smooth and flat surface. The card chart has a plurality of squares, with contrasting shaded or brightly colored dots or symbols with different symbols and colors established by a person using the speech coordinator. These shaded colored dots or symbols are staggered randomly throughout the card chart. The shaded or colored dots or symbols may be found in a constant row of squares or staggered by skipping one, two, or more squares. If a Parkinson's Disease patient slurs and mumbles words, the tool is placed at the top left square of the chart. The tool is then used to slowly scan each square; a shaded or colored dot or symbol inside a square is a signal for a Parkinson's Disease patient to speak a word. The patient then continues to slowly scan the rows of squares to locate the next square that contains a shaded or colored dot or symbol; each time a shaded or colored dot or symbol is visible through the tool opening, the patient stops on the square to speak again. This arrangement causes hesitation and enables the patient to pronounce words more clearly, eliminating slurring and mumbling of words and giving the patient a method of improving speech communication by artificial timing of the spoken word.

#### **BRIEF DESCRIPTION OF THE FIGURES OF THE DRAWING**

Figure 1 is a top view of the elongated tool showing openings at one end.

Figure 2 shows a side view of the tool's handle.

Figure 3 shows a top view of the companion card chart.

Figure 4 shows top view of tool placed on companion card chart showing one shaded or colored

dot or symbol through the tool opening.

Figure 5 shows top view of tool placed on companion card chart showing tool moved to the next square where the shaded or colored dot or symbol is showing through the tool opening.

Figure 6 shows top view of tool placed on companion card chart showing tool moved to the next square where the shaded or colored dot or symbol is showing through the tool opening.

### **DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT**

The drawing shows the view of the embodiment of the speech coordinator system in Figure 1 and 2. A lightweight flat material is approximately 5 inches in length and 1 1/4 inches wide (10) having one opening. The window opening is approximately 1/2 inch in diameter to view shaded or colored dots or shapes (14). Figure 3 shows a companion card chart that is used in conjunction with the tool and is made of paper or any suitable material approximately 5 inches wide and approximately 7 inches long (22). The card charts, which can be many different shapes or sizes, contain shaded or colored squares (26); some squares will contain shaded or brightly colored symbols that are very visible to the eye (30). The shaded or colored symbols are staggered throughout the card chart unevenly; some symbols may be found in continuous rows of squares or staggered by skipping one, two, or more squares. On Figure 4 the companion card chart shows the tool located in the top left-hand corner row. When the Parkinson's diseased individual responds to conversation, the individual moves the tool left to right slowly to the next square with shaded or brightly colored symbols. Figure 5 shows the companion card chart with the tool opening that has been moved over the next shaded or brightly colored symbol. When the shaded or colored symbol appears in the tool opening, it serves as a signal for a Parkinson's

diseased individual to speak, usually one word. Figure 6 shows the tool has moved to the next square with a shaded or brightly colored symbol, which signals the patient to speak again. This will help to slow down and reduce the movement of muscles used for speech coordination and speech production, helping the patient to pronounce each word more clearly. By causing hesitation and this enables the individual to pronounce words more clearly, eliminating slurring and mumbling of a word and giving the patient a method of improving speech communication by artificial timing of the spoken word.

### **SUMMARY OF THE INVENTION**

The invention is directed to a tool that will help a Parkinson's disease individual to coordinate the face, lips, tongue, and jaws of the articulatory system. These muscles move at rapid speeds as well as in a coordinated manner. This tool will greatly help to coordinate these muscles, allowing for a much clearer and precise speech. The tool's elongated body is approximately 5 inches long, made of a material selected from consisting of light weight wood, plastic, or metal, approximately ½ inch thick and 1 1/4 inches wide. The elongated body has one window opening, the window opening giving the individual the opening to view different colored dots or symbols. At the opposite end of the window opening an extra ½ inch extra thickness is attached to the elongated body to serve a handle to control and direct the tool. The function of the tool opening works in conjunction with a companion card chart which can be different shapes or sizes is made of a material selected from the group consisting of paper, plastic or any material that has a smooth, flat surface, with a approximately ½ inch shaded or brightly colored squares, that are very visible to the eye. Colored dots or colored shapes that contract the squares are staggered, skipping one, two, or more squares. When a Parkinson's disease individual responds